UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,294	04/02/2001	Hidemitsu Higuchi	ASA-995	8749

7590 02/14/2005

MATTINGLY, STANGER & MALUR, P.C.
1800 Diagonal Road, Suite 370
ALEXANDRIA, VA 22314

EXAMINER	
MATTIS, JASON E	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/822,294	HIGUCHI ET AL.	
	Examiner	Art Unit	
	Jason E Mattis	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-6 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1 and 4-6 is/are rejected.

7)☒ Claim(s) 2 and 3 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 4/2/01 and 4/9/03.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bass et al. (U.S. Pat. 6272134) in view of Ogawa et al. (US Pub. No. US 2002/0075872 A1).

With respect to claim 1, Bass et al. discloses a multicast communication method **(See column 5 lines 25-45 of Bass et al. for reference to communication using a multicast frame)**. Bass et al. also discloses allowing a communication control apparatus for performing communication in accordance with a first protocol to communicate with a communication apparatus for performing communication with a second protocol **(See column 5 lines 57-67, column 13 lines 23-61, and Figures 2 and 9 of Bass et al. for reference to allowing hardware communicating in a first protocol to communicate multicast frames to hardware communicating in a second protocol)**. Bass et al. further discloses discriminating that a packet is a data packet based on its header **(See column 13 lines 23-41 and Figure 9 of Bass et al.**

for reference to discriminating between frames based on headers). Bass et al. also discloses when it is determined that the packet is a data packet, converting the header of the multicast packet from a first protocol to a second protocol and generating a multicast packet of the second protocol and outputting the generated packet to a network using the second protocol **(See column 5 lines 57-67, column 13 lines 23-61, and Figures 2 and 9 of Bass et al. for reference to modifying the header of a multicast frame when it is determined that the destination of the frame uses a different protocol than the multicast frame is currently in to generate a frame of the second protocol and outputting the generated frame to a network using the second protocol)**. Bass et al. does not disclose that the first and second protocols are IPv4 and IPv6 respectively.

With respect to claim 4, Bass et al. discloses receiving a multicast packet from a network that uses the second protocol and converting the header the packet into a header of the first protocol to generate a multicast data packet of the first protocol and outputting the generated packet **(See column 5 lines 57-67, column 13 lines 23-61, and Figures 2 and 9 of Bass et al. for reference to modifying the header of a multicast frame to generate a multicast frame of a different protocol and then outputting the generated multicast frame)**. Bass et al. does not disclose that the first and second protocols are IPv4 and IPv6 respectively. Bass et al. also does not disclose discriminating whether an IPv6 address has been registered.

With respect to claim 5, Bass et al. discloses a method of establishing multicast communication **(See column 5 lines 25-45 of Bass et al. for reference to**

communication using a multicast frame). Bass et al. also discloses allowing communication between a device that uses a first protocol and a device that uses a second protocol **(See column 5 lines 57-67, column 13 lines 23-61, and Figures 2 and 9 of Bass et al. for reference to allowing hardware communicating in a first protocol to communicate multicast frames to hardware communicating in a second protocol)**. Bass et al. further discloses receiving a packet which has been transmitted from the second protocol device, translating the received packet into a packet of the first protocol and outputting the translated packet **(See column 5 lines 57-67, column 13 lines 23-61, and Figures 2 and 9 of Bass et al. for reference to modifying the header of a multicast frame to generate a multicast frame of a different protocol and then outputting the generated multicast frame)**. Bass et al. does not disclose that the first and second protocols are IPv4 and IPv6 respectively.

With respect to claim 6, Bass et al. discloses receiving a packet which has been transmitted from the first protocol device, translating the received packet into a packet of the second protocol, and outputting the translated packet **(See column 5 lines 57-67, column 13 lines 23-61, and Figures 2 and 9 of Bass et al. for reference to modifying the header of a multicast frame to generate a multicast frame of a different protocol and then outputting the generated multicast frame)**. Bass et al. does not disclose that the first and second protocols are IPv4 and IPv6 respectively.

Ogawa et al., in the field of communications, discloses converting an IPv4 packet to an IPv6 packet and vice versa **(See pages 6-7 paragraphs 115-134 and Figures 23 and 24 of Ogawa et al. for reference to converting packets from IPv4 to IPv6 and**

vice versa). Ogawa et al. also discloses discriminating whether an IPv6 address has been registered before converting an IPv4 packet into and IPv6 packet **(See page 6 lines 117-120 and steps S52-S55 of Ogawa et al. for reference to searching the contents of a routing table to determine an IPv6 address corresponding the and IPv4 address)**. Converting packets from IPv4 to IPv6 has the advantage of allowing devices from a hybrid IPv4/IPv6 network to transmit packets to each other regardless of the protocol the devices use.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Ogawa et al., to combine converting packets from IPv4 to IPv6 with the multicast protocol conversion device and method of Bass et al. with the motivation being to allow devices from a hybrid IPv4/IPv6 network to transmit packets to each other regardless of the protocol the devices use.

Allowable Subject Matter

3. Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Li et al. (U.S. Pat. 6526054) discloses converting between different multicast protocols at the boundaries of networks using different protocols. Hagirahim et al. (U.S. Pat. 6751218) discloses converting a multicast stream from one protocol to another protocol.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jem

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600